WHAT IS CLAIMED IS:

Sub B3

1. A display device comprising:

a substrate having an insulating surface;

at least one thin film transistor formed on said insulating surface,e said thin film transistor having a semiconductor film comprising silicon as an active layer thereof;

an interlayer insulating film comprising an inorganic material formed on said thin film transistor;

a first contact hole in said interlayer insulating film;

a wiring formed on said interlayer insulating film and electrically connected to said thin film transistor through said first contact hole formed in said interlayer insulating film;

a leveling film comprising an organic resin to provide a leveled upper surface over said thin film transistor;

a second opening through said leveling film and said interlayer insulating film; and

a pixel electrode formed over said leveled upper surface and directly connected to said semiconductor film of said thin film transistor through said second opening,

wherein an edge of said leveling film at a periphery of said second opening is rounded.

Sub D1

2. A device according to claim 1 wherein said semiconductor film comprises crystalline silicon.

3. A device according to claim 1 wherein said thin film transistor further comprises a gate electrode located over said semiconductor film with a gate insulating film interposed therebetween.

4. A device according to claim 1 wherein said organic resin comprises polyimide.

5. The device of claim 1 wherein said pixel electrode comprises a transparent conductive film.

6. The device of claim 1 wherein said display is a digital display.

7. A display device comprising:

a substrate having an insulating surface;

at least one thin film transistor formed on said insulating surface, said thin film transistor having a semiconductor film comprising silicon as an active layer thereof;

an interlayer insulating film comprising an inorganic material formed on said thin film transistor;

a wiring formed on said interlayer insulating film and electrically connected to said thin film transistor through a contact hole formed in said interlayer insulating film;

a leveling film comprising an organic resin provided over said thin film transistor, said interlayer insulating film and said wiring;

an opening through said leveling film and said interlayer insulating film; and

a pixel electrode formed over said leveling film and directly connected to said semiconductor film of said thin film transistor through said opening,

wherein a diameter of said opening is larger at an uppermost surface of said leveling film than at a lowermost surface thereof.

8. A device according to claim 7 wherein said semiconductor film comprises crystalline silicon.

9. A device according to claim 7 wherein said thin film transistor further comprises a gate electrode located over said semiconductor film with a gate insulating film interposed therebetween.

10. A device according to claim 7 wherein said organic resin comprises polyimide.

11. The device of claim 7 wherein said pixel electrode comprises a transparent conductive film.

12. The device of claim 7 wherein said display is a digital display.

13. A display device comprising:

a substrate having an insulating surface;

at least one thin film transistor formed on said insulating surface, said thin film transistor having a semiconductor film comprising silicon as an active layer thereof;

an interlayer insulating film over said thin film transistor, said interlayer insulating film comprising an inorganic material;

a leveling film comprising an organic resin formed over said interlayer insulating film and said thin film transistor; and

a pixel electrode formed over said leveling film and directly connected to said semiconductor film of said thin film transistor through an opening provided in said leveling film,

wherein an edge of said organic resin film at a periphery of said opening is rounded.

14. A device according to claim 13 wherein said semiconductor film comprises crystalline silicon.

15. A device according to claim 13 wherein said thin film transistor further comprises a gate electrode located over said semiconductor film with a gate insulating film interposed therebetween.

16. A device according to claim 13 wherein said organic resin comprises polyimide.

17. The device of claim 13 wherein said pixel electrode comprises a transparent conductive film.

18. The device of claim 13 wherein said display is a digital display.

19. A display device comprising:

a plurality of thin film transistors formed on an insulating surface, each of said thin film transistors comprising at least a semiconductor film;

an interlayer insulating film formed on the thin film transistors, said interlayer insulating film comprising an inorganic material;

first openings formed in the interlayer insulating film on the respective transistors;

a leveling layer formed over said interlayer insulating film to provide a leveled upper surface, wherein said leveling layer comprises an organic resin and is prevented from directly contacting said semiconductor film by said interlayer insulating film;

second opening through said leveling layer and said interlayer insulating film over the respective transistors; and

pixel electrodes formed over said leveled upper surface, each of said pixel electrodes being directly connected to said semiconductor film of the corresponding transistors through the corresponding second openings.

20. A device according to claim 19 wherein said semiconductor film comprises

crystalline silicon.

21. A device according to claim 19 wherein said thin film transistor further comprises a gate electrode located over said semiconductor film with a gate insulating film interposed therebetween.

22. A device according to claim 19 wherein said organic resin comprises polyimide.

23. The device of claim 19 wherein said pixel electrode comprises a transparent conductive film.

24. The device of claim 19 wherein said display is a digital display.

25. A display device comprising:

a substrate having an insulating surface;

at least one thin film transistor formed on said insulating surface, said thin film transistor having a semiconductor film comprising silicon as an active layer thereof;

an interlayer insulating film comprising an inorganic material formed on said thin film transistor;

a first contact hole in said interlayer insulating film;

a wiring formed on said interlayer insulating film and electrically connected to said thin film transistor through said first contact hole formed in said interlayer insulating film;

a leveling film comprising an organic resin to provide a leveled upper surface over said thin film transistor;

a second opening through said leveling film and said interlayer insulating film; and

a pixel electrode formed over said leveled upper surface and directly

contacting said semiconductor film of said thin film transistor through said second opening.

26. A device according to claim 25 wherein said semiconductor film comprises crystalline silicon.

27. A device according to claim 25 wherein said thin film transistor further comprises a gate electrode located over said semiconductor film with a gate insulating film interposed therebetween.

28. A device according to claim 25 wherein said organic resin comprises polyimide.

29. The device of claim 25 wherein said pixel electrode comprises a transparent conductive film.

30. The device of claim 25 wherein said display is a digital display.